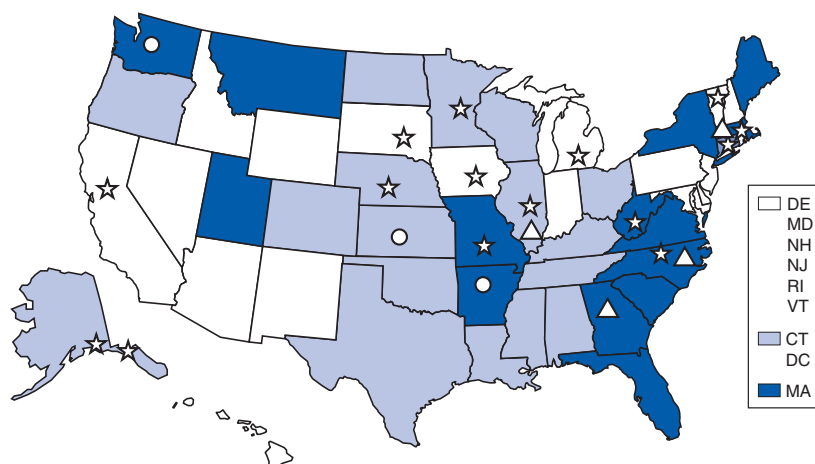


Division for Heart Disease and Stroke Prevention

Addressing the Nation's Leading Killers 2007

CDC-Funded Heart Disease and Stroke Prevention Programs, 2006



State Heart Disease and Stroke Prevention Program

- No funding*
- Capacity building
- Basic implementation

Other Programs in the States

- △ Paul Coverdell National Acute Stroke Registries (4)
- State Cardiovascular Health Examination Surveys (3)
- ☆ WISEWOMAN Programs (15)

* Includes 17 states, all U.S. territories, and tribal groups.

“CDC’s Division for Heart Disease and Stroke Prevention is the foundation for the development of the science and research necessary to prevent these leading killers, which continue to rob too many Americans of precious years of life.”

*Julie Louise Gerberding, MD, MPH
Director, Centers for Disease Control and Prevention*

Revised April 2007

Heart Disease and Stroke: The Nation's Leading Killers

Deaths, Disability, and Cost

Heart disease and stroke are the most common cardiovascular diseases. They are the first and third leading causes of death for both men and women in the United States, accounting for nearly 40% of all annual deaths. More than 1.4 million Americans die of cardiovascular diseases each year, which is 1 death every 36 seconds. Although these largely preventable conditions are more common among people aged 65 or older, the number of sudden deaths from heart disease among people aged 15–34 has increased.

In addition, more than 79 million Americans currently live with a cardiovascular disease. For example, coronary heart disease is a leading cause of premature, permanent disability in the U.S. workforce. Stroke alone accounts for disability in nearly 1 million Americans. More than 6 million hospitalizations each year are because of cardiovascular diseases.

The economic impact of cardiovascular diseases on our nation's health care system continues to grow as the population ages. The cost of heart disease and stroke in the United States is projected to be \$431.8 billion in 2007, including health care expenditures and lost productivity from death and disability.

Risk Factors Must Be Addressed

Two of the major independent risk factors for cardiovascular diseases are high blood pressure and high blood cholesterol.

- In 2004, nearly 1 in 3 U.S. adults had high blood pressure (hypertension), and 37.4% (about 42 million people) had prehypertension, defined as a systolic pressure of 120–139 mm Hg or a diastolic pressure of 80–89 mm Hg.
- For 2007, the estimated national direct and indirect cost for high blood pressure was \$66.4 billion.
- High blood pressure was listed as a primary or contributing cause of death in more than 11% of U.S. deaths in 2003.
- About 105 million U.S. adults have cholesterol levels of 200 mg/dL or higher, which exceed the *Healthy People 2010* objective of <200 mg/dL.

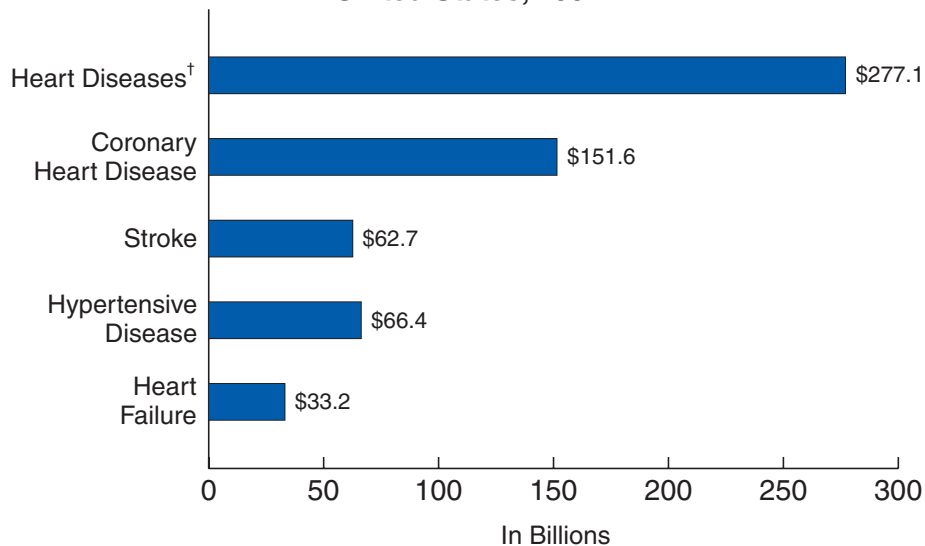
- A 10% decrease in total cholesterol levels in the U.S. population overall may result in an estimated 30% reduction in the incidence of coronary heart disease.

A key strategy for addressing heart disease and stroke is to educate the public and health care practitioners about the importance of prevention. Current national guidelines recommend that all adults have their blood pressure checked every 2 years and their blood cholesterol levels checked every 5 years. Systems changes are needed to encourage health care practitioners to follow national guidelines for treating patients with or at risk for heart disease and stroke, such as prescribing beta-blockers and aspirin. Preventive actions can help people with any level of blood pressure or cholesterol reduce their risk.

People also need to be educated about the signs and symptoms of heart attack and stroke and the importance of calling 911 immediately after symptoms begin. Forty-seven percent of heart attack victims and about the same percentage of stroke victims die before emergency medical personnel arrive.

Other important risk factors for heart disease and stroke, such as diabetes, tobacco use, physical inactivity, poor nutrition, overweight, and obesity, need to be addressed through lifestyle changes and appropriate use of medications.

**Estimated Direct and Indirect Costs of Major Cardiovascular Diseases and Stroke*
United States, 2007**



* Totals do not add up because of rounding and overlap.

[†] Includes coronary heart disease, congestive heart failure, part of hypertensive disease, cardiac dysrhythmias, rheumatic heart disease, cardiomyopathy, pulmonary heart disease, and other or ill-defined "heart" diseases.

Source: American Heart Association. *Heart Disease and Stroke Statistics—2007 Update*.

CDC's National Leadership

CDC is committed to ensuring that all people, especially those at greater risk for health disparities, will achieve their optimal lifespan with the best possible quality of health in every stage of life. With new health protection goals that support healthy people in healthy places across all life stages, CDC is setting the agenda to enable people to enjoy a healthy life by delaying death and the onset of illness and disability by accelerating improvements in public health.

In 2006, CDC created the **Division for Heart Disease and Stroke Prevention** (DHDSP). This division provides national leadership to reduce the burden of disease, disability, and death from heart disease and stroke through its research and programs. With fiscal year 2007 funding of \$57.3 million (\$44.3 million for heart disease and stroke and \$13 million for WISEWOMAN), CDC supports State Heart Disease and Stroke Prevention Programs in 32 states and the District of Columbia, WISEWOMAN projects at 15 sites, the Paul Coverdell National Acute Stroke Registry in 4 states, and the State Cardiovascular Health Examination Survey in 3 states. CDC also provides states and communities with a wide range of tools and resources for prevention and health promotion.

Paul Coverdell National Acute Stroke Registry

In 2006, CDC's Paul Coverdell National Acute Stroke Registry funded Georgia, Illinois, Massachusetts, and North Carolina to create state-based stroke registries. This funding allows states to address quality-of-care gaps between recommended treatment guidelines and actual hospital practice. The registries measure, track, and encourage the standardization of treatment practices to improve emergency and long-term care for acute stroke victims. The long-term goal of this program is to ensure that all Americans receive the highest quality of acute stroke care available.

WISEWOMAN Program

The DHDSP includes CDC's WISEWOMAN (Well-Integrated Screening and Evaluation for Women Across the Nation) program. WISEWOMAN provides underinsured or uninsured, mostly minority, women aged 40–64 access to screening and lifestyle interventions to reduce their risk for heart disease, stroke, and other chronic diseases.

Public Health Action Plan

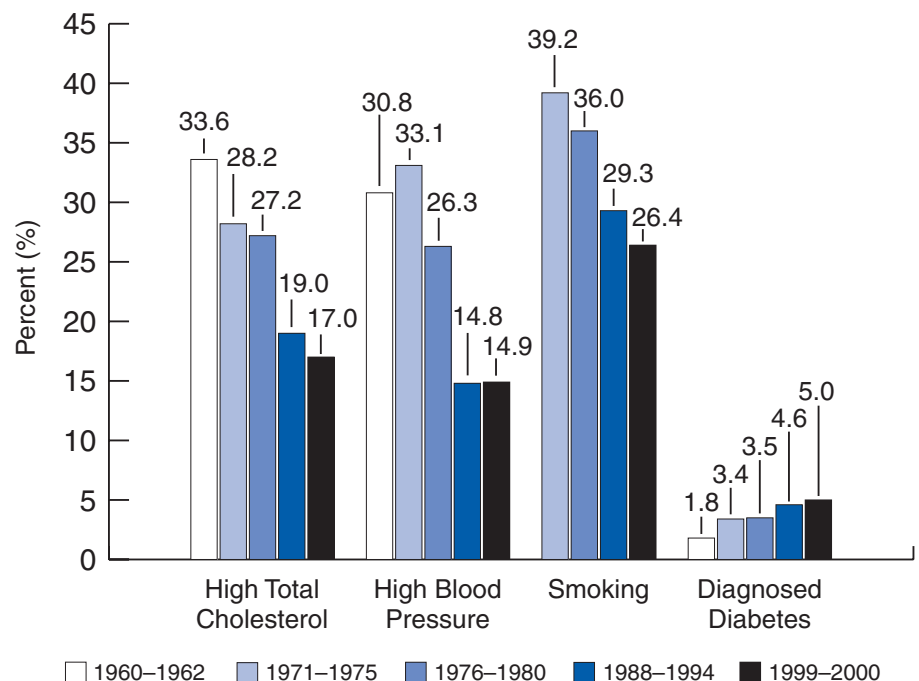
A Public Health Action Plan to Prevent Heart Disease and Stroke is a groundbreaking collaboration that provides guidance for the nation's heart disease and stroke prevention efforts. The National Forum for Heart Disease and Stroke Prevention is charged with implementing the *Action Plan*, which addresses *Healthy People 2010* goals specific to heart disease and stroke.

These goals include prevention of risk factors, detection and treatment of risk factors, early identification and treatment of heart attacks and strokes, and prevention of recurrent cardiovascular events. CDC and its public health partners provide ongoing national leadership to ensure meaningful progress in implementing this plan.

Atlases Highlight Local Data

CDC has published a series of four atlases on geographic and racial/ethnic disparities in heart disease and stroke in the United States. This series includes the *Atlas of Stroke Mortality*, *Men and Heart Disease*, *Women and Heart Disease*, and the *Atlas of Heart Disease and Stroke Among American Indians and Alaska Natives*. These publications and their interactive Web sites provide local communities with mortality and risk factor data needed to direct resources to areas of greatest need.

Cardiovascular Risk Factor Trends Among U.S. Adults Aged 20–74



*Data are from the National Health Examination Survey, 1960–1962, and the National Health and Nutrition Examination Survey, 1971–1975, 1976–1980, 1988–1994, and 1999–2000. Source: JAMA 2005;293:1868–74.

State Programs and Key Partnerships

CDC's Heart Disease and Stroke Prevention Program helps states control high blood pressure and high blood cholesterol, increase awareness of the signs and symptoms of heart attack and stroke, improve emergency response, improve quality of care, and eliminate health disparities. Examples of state activities include the following:

- Partnering with the federal Health Resources and Services Administration in the National Health Disparities Collaborative to help community health care centers better manage high blood pressure among underserved populations.
- Ensuring work site detection and follow-up services to control high blood pressure and high blood cholesterol among workers.
- Providing public education initiatives to raise awareness of the signs and symptoms of heart attack and stroke and the need to call 911 immediately after symptoms begin.
- Establishing policies for emergency medical service personnel and hospitals to treat stroke as an emergency.
- Helping hospitals make systems changes that improve adherence to national guidelines and ensure quality care for victims of heart disease and stroke.

State Cardiovascular Health Examination Survey

CDC and the National Heart, Lung, and Blood Institute are the lead federal agencies addressing the *Healthy People 2010* goal of reducing the nation's heart disease and stroke burden. CDC funds Arkansas, Kansas, and Washington to develop and implement a state cardiovascular health examination survey. This survey helps states develop strategies for controlling high blood pressure and high cholesterol among state residents and to identify health disparities.

Future Directions

CDC will continue to provide national leadership to prevent death and disability from heart disease and stroke, eliminate disparities in health and health care, and work with its many partners to fully implement the *Action Plan*. Future priorities are to continue to 1) build the public health foundation for translating science into practice, 2) address disparities in quality years of healthy life by ensuring access to basic essential services, and 3) fund the unfunded states to help prevent heart disease and stroke among all Americans.

State Programs in Action

Stroke is the fourth leading cause of death in Mississippi, accounting for over 1,600 deaths, or 5.9% of all deaths in 2004. This rate is nearly 25% higher than the overall U.S. rate. The **Mississippi Heart Disease and Stroke Prevention Program** is working to increase awareness among health care professionals and the public about the signs, symptoms, and treatment of stroke. Recent initiatives include Advanced Stroke Life Support training for hospital and prehospital staff, an educational tool kit for hospitals, and an awareness program targeting health care providers.

Heart disease is the leading cause of death and disability in Kansas, and death rates in Missouri were higher than in 40 other states in 2003. To address this major health and economic burden, the **Heart Disease and Stroke Prevention Programs in Kansas and Missouri** worked with major health groups and 14 employers to form the Community Initiative on Cardiovascular Health and Disease. In 2006, the initiative surveyed over 33,000 employees to assess their knowledge of and receptiveness to workplace interventions to promote health and prevent disease. This information is being used to develop targeted interventions for individual businesses and the initiative as a whole.

Heart disease is the leading cause of death in Washington State. The **Washington Heart Disease and Stroke Prevention Program** worked with a diabetes program called Qualis Health and managed care organizations to sponsor the Washington State Collaborative (WSC). As a result of a WSC training and a commitment to monitor specific performance measures, six primary care practices increased blood pressure control from 58.7% to 59.2% and LDL-cholesterol control from 35.2% to 38.2%. Washington's achievements demonstrate the opportunity for state programs to serve as a catalyst for improvements in the health system that lead to prevention and management of cardiovascular disease.

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